

DI LIU

Wyss Institute for Biologically Inspired Engineering &
Department of Systems Biology, Harvard Medical School

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EDUCATION AND ACADEMIC EXPERIENCE

- **Wyss Institute for Biologically Inspired Engineering & Department of Systems Biology, Harvard Medical School** 12/2016-present
Postdoctoral researcher
Advisor: Prof. Peng Yin
- **Dept. of Chemistry, University of Chicago** 9/2011-12/2016
Ph.D. in Chemistry (2016); M.S. Degree in Chemistry (2012); GPA: 4.0/4.0
Thesis: Synthetic Nucleic Acid Topology
Advisor: Prof. Yossi Weizmann
- **Sch. of Chemistry and Chemical Engineering, Nanjing University** 9/2007-6/2011
B.S. in Chemistry (2011)
Ranking: 1/136; Overall GPA: 94/100; Major GPA: 96/100
Research in the Design and Synthesis of Photoactivable Platinum-based Anticancer Drugs
Advisor: Prof. Zijian Guo

PUBLICATIONS

8. G. Chen, **D. Liu**, H. C. Rees, Y. Weizmann, "Site-Specific Functionalization of Nanoparticles for Programmable Self-Assembly", *under revision*, (2017).
7. **D. Liu**, Y. Shao, G. Chen, Y. Tse-Dinh, J. A. Piccirilli, Y. Weizmann, "Synthesizing topological structures containing RNA", *Nature Commun.*, 2017, 8: 14936.
6. **D. Liu**, G. Chen, U. Akhter, T. M. Cronin, Y. Weizmann, "Creating Complex Molecular Topologies by Configuring DNA Four-way Junctions", *Nature Chem.*, 2016, 8(10): 907-914. (Cover Story)
5. D. Wen, Y. Peng, **D. Liu**, Y. Weizmann and Ram I. Mahato. "Mesenchymal Stem Cell and Derived Exosome as Small RNA Carrier and Immunomodulator to Improve Islet Transplantation", *J. Control Release*, 238, 166-175 (2016).
4. G. Chen‡, **D. Liu**‡, C. He‡, T. R. Gannet, W. Lin, Y. Weizmann, "Enzymatic Synthesis of Periodic DNA Nanoribbons for Intracellular pH Sensing and Gene Silencing", *J. Am. Chem. Soc.*, 137, 3844-3851 (2015). ‡ Co-first authors. (Cover Story and Highlighted in JACS Spotlights)
3. **D. Liu**, J. L. Ma, W. Zhou, W. J. He and Z. J. Guo, "Synthesis and Photoactivity of a Pt(II) Complex Based on an *o*-Nitrobenzyl-derived Ligand", *Inorganica Chimica Acta*, 2012, 393:198-203.
2. **D. Liu**, H. F. Zhang and Y. Lu, "Computer Modeling of Linear Condensation Polymerization", *Chinese Polymer Bulletin (Gaofenzi Tongbao, Chinese)*, 2012, (02):103-107.
1. **D. Liu**, H. F. Zhang and Y. Lu, "Computer Modeling of Probability Effect in the Chemical Reactions of Polymers", *Chinese Polymer Bulletin (Gaofenzi Tongbao, Chinese)*, 2011, (06):94-99.

Manuscripts in preparation:

2. "Crystallizing Artificially Designed Complex RNA Nanostructures".
1. "Complex Geometries Assembled by an RNA Single Strand via Artificially Designed Branched Kissing Loops".

PRESENTATIONS AND TALKS

8. "Crystallizing Artificially Designed Complex RNA Nanostructures" (Poster), *HHMI Science Meeting*, Janelia Research Campus, Ashburn, VA, Sep. 2016.
7. "Crystallizing Artificially Designed Complex RNA Nanostructures" (Poster), *13th Annual Conference on Foundations of Nanoscience: Self-Assembled Architectures and Devices (FNANO16)*, Snowbird, UT, April 2016.
6. "Synthetic Nucleic Acid Topology" (Oral presentation), *Tiger Talk*, Department of Chemistry, University of Chicago, Dec. 2015.
5. "Synthetic RNA Topology via Programmed Self-assembly" (Oral presentation), *Chicagoland RNA Club*, Chicago, IL, Nov. 2015.
4. "Controlling the Bending and Twist of RNA Assemblies via Artificially Designed Loop-Bulge Kissing

Interactions" (Poster), *21st International Conference on DNA Computing and Molecular Programming (DNA21)*, Harvard University, Aug. 2015.

3. "Folding a Single Strand of RNA into Nanocages" (Poster), *Gordon Research Conference on RNA Nanotechnology*, Ventura, CA, Feb. 2015.

2. "Creating Complex Molecular Topologies by Configuring DNA Four-Way Junctions" (Contributed talk), *20th International Conference on DNA Computing and Molecular Programming (DNA20)*, Kyoto University, Japan, Sep. 2014.

1. "Creating Complex Molecular Topologies by Configuring DNA Four-Way Junctions" (Poster), *AAAS 2014 Annual Meeting*, Chicago, IL, Feb. 2014.

AWARDS AND HONORS

(During Graduate Study)

- 2016 Chinese Government Award for Outstanding Self-financed Students Abroad 2017
- ISNSCE Student Award (DNA20) 2014
- HHMI International Predoctoral Fellowship 2014-2016
- Everett E. Gilbert Memorial Prize for the Best Third Year Experimentalist in Organic Chemistry 2014
- AAAS 2014 Student Poster Competition, Honorable Mention in Physical Sciences Category 2014
- Martha Ann and Joseph A. Chenicek Graduate Research Fellowship 2013
- Gerhard Closs Teaching Award in Organic Chemistry 2012

(During Undergraduate Study)

- National Scholarship (Ministry of Education of the P.R. China) 2008,2010
- 1st Province-wide Undergraduate Chemistry Experiment Competition (Jiangsu Chemistry Society), awarded with First Prize 2010
- National Undergraduate Innovation Program, awarded with Excellent Work Prize 2010
- JIANG Wenruo Scholarship 2009

(During High-school Study)

- National Chemistry Olympiad Competition for High School Students, awarded with First Prize (Recommended for Admission to NJU) 2006
- Student Travel Awards: Windt Graduate Student Travel Award (2016), DNA20 Student Travel Award (2014), GSA Travel Award (2014)